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How We Once Lived

THE GENOME, our personal genetic constitution, is responsible for thousands of biochemical and physiological processes necessary for life. Beyond that, the human part of the genome has given us a brain for making choices and has also passed on certain expectations about the categories of those choices. Between the ages of nine and twenty months, for example our genome guides us to identify and name body parts and animals. As surely as it disconnects baby teeth in the sixth year, between the thirteenth and fifteenth year the genome calls for spiritual grounding—a spiritual experience that will connect the person to place and cultural heritage. Yet it does not tell us what language to speak, which body parts or which animals to name, or which tooth fairy to invoke. Bound by some intrinsic framework of social demands, we are set free to pursue the path to the fulfillment of these genetic requirements without specific rules of child care, of nurturance for each other, or of community design. This ambiguity between genetic requirements and freedom to express them is an astonishing aspect of human nature.

The human part of our genome came into existence along with social patterns and skills. And these were followed, over hundreds of thousands of years, by different human cultures, each unique and yet appropriate to the human niche. In a broad sense there was a Pleistocene way of life that encompassed the many human primal cultures, all of which were 37 consistent in certain ways and are shared even today among recent hunter/gatherers. We are free to create culture as we wish, but the prototype to which the genome is accustomed is Pleistocene society. As a culture we may choose or invent any language or set of gods we like. But that we must make up a language and choose gods is what it means to be human.

Some cultures are more socially and ecologically attuned than others and produce institutions and perhaps even individuals who are less churlish, loutish, and brutish. Although cultural modes differ, one is, in itself, as “good” as any other. There is no inherent difference in the humanity of different peoples. We are a species. If the lives of some are better, it is because they live in a natural environment and a cultural system that are closer to meeting the “expectations” of the genes: the contract with evolution is being more generously fulfilled. Our world does not make us; nor do we make ourselves; we are the continuing creation of the interaction between our organic structure and the way we shape the world around us. It’s possible to do it badly. It’s also possible to do it well. We are an epigenetic phenomenon: our development is elaborated continuously during our entire lifetimes as it has been down through the ages.

OUR BODIES ARE NICHE-FIXED, defined by the characteristic features of our ecology in the strict sense of the word—that is, the energy and symbiotic patterns and demographics of our genus, *Homo*, as they have existed for perhaps two million years. The genome has its demands, interpreted by the social structure of the primordial group. Above all, it links the individual’s relationship to the social and ecological environment by the demands of a calendar bound to age. The highly specialized human brain and its delicately poised *locum tenens*, the mind, can perform extraordinary feats within this context . . . and an incredible variety of destructive derangement without it.

The “hard, irreducible stubborn core of biological urgency, and biological necessity, and biological *reason*,” says Lionel Trilling, “reserves the right to judge the culture, and resist and revise it.”¹ This core, I propose, 38 *Coming Home to the Pleistocene* guides ontogeny, the phases of each individual life, from conception to death. The expectations of our genetic endowment are not a gray, passive mass for registering whatever comes to mind, nor some compelling conglomeration of irresistible reflex arcs. Because of our evolutionary past and the extraordinary way life has shaped our mind and bodies, we are required by the genome to proceed along a path of roles, perceptions, performances, understandings, and needs, none of which is specifically detailed by the genome but must be presented by culture. Mentally and emotionally, children, juveniles, and adolescents move through a world that is structured around them following a time-layered sequence of mother and other caregivers, nature, and cosmos. Infants go from their own and their mother’s body to exploring the body of the earth to the body of the cosmos. Our basic human intuition tells us that these bodies comprise a “matrix,” that is, “mother.” The significance of perceiving environments through a series of different but perpetually “motherly” matrices or contexts is that the world is prototypically organic, feminine, and maternal. The study of nature among primitives begins in childhood but is a lifelong preoccupation.

The most crucial human experience is childhood—its bonding, socializing, and exploration of the nonhuman world, its naming and identification. Speech emerges according to an intrinsic timetable. Language must be taught. But

nature is the child's tangible basis upon which symbolic meanings will be posited. The naming and recognition of plants and animals of the home range is the primary function of speech in childhood and the basis for later metaphorical meaning. This is the first lesson: the basic mode of identification and understanding. Early speech is in terms of nouns and verbs. Talking—conversation—is not as important to small children as words for labels and categories, the skill of discriminating and naming without which no meaningful speech or higher cognition can take place. Naming at first involves body parts and then animals because anatomy is fundamental to all identity: body parts are the supreme objects for learning the skills of taxonomy. The ability to read the landscape or the environment, later in life, grows from establishing natural things as its anatomy, keys to the wholeness and well-being of the habitat.

Every change in a child's body and in its daily routine is anticipated and calls for shifting roles among its family, siblings, and others—changes not discovered anew each generation but anticipated by social experience and intuition. Timing is everything. Ontogeny involves not only physical traits, like tooth eruption or growth and change of hair color, but the personality as well. Neoteny, the specialty of our species, is mitigated by the readiness of human society to meet each stage of the child's development with an appropriate cultural response that is analogous to the optimal environmental conditions necessary for a butterfly to emerge from a chrysalis.

Neoteny, the immaturity factor, is intimately associated early in life with a topographic intuition—that is, place in consciousness as an aspect of one's own body and physiognomy. Early correlation in human subconsciousness between body and earth, as the child and then the youth explores and wanders through his or her home range, is basic to future visualizing of nonphysical reality and cosmological “places.”

THE SOUND WORLD as well as the sight world is extremely important to the development of a sense of place in children. Paul Sears, the renowned ecologist, is said to have told his children, “Never ignore a sound,” whether it be the slight clicking of the first snowfall against leaves and grass or the sudden silence of frogs or birds. Not only separately but together, things have a voice. The Voice of life is made up of calls, drums, songs, musical instruments, moving wind and water; they tell us of the livingness of the world in a surprisingly coherent milieu. Vision discovers parts but sound links them. This process starts internally, like the rumble of an earthquake, becoming internal and external at once. Gary Snyder has called it “the primacy of together-hearing.” Even percussive music and great intervals of silence are evidently conducive to our well-being. We have been surrounded now for millennia with domestic places that have become metaphors of a diminished self. Perhaps one way home is the path through music.

Those of us who continue to find coherence in music in a disorderly world may find it easier to open ourselves to music in new ways that⁴⁰ would reconsider all sound as music. Sound therefore has a dual voice. The oldest myths of the origin of music tell of the mellifluous calls of grouse and certain pigeons, cackle of scrub turkeys, trumpeting of cranes, tempos kept by drums and bamboo jaws and rattles made of seedpods, mussel shells, gourds, or crayfish claws. The myths of human/bird transformations explain the categories of natural sound—weeping, song, poetry, whistling, talking, mimicry, noise. Nature is like a tuning fork: its space, time, and seasons are marked by an auditory pulse with its variations in echo and penetration, layers of the daily cycles of frog, bird, and insect calls. One sings in duets with the birds, cicadas, and waterfalls.

The Temiar, musicologist Marina Roseman tells us, are a rain-forest people of the Malay peninsula whose culture is filled with song and spirituality. “Instead of alienating flowers, trees, or cicadas as inherently different and distant,” she says, “the Temiar stress an essential similarity.” The Temiar “receive inspiration and constant regeneration from interactions with the essences of mountains, rivers, fruits, and creatures of the tropical rain forest. . . . Temiar culture is an exquisite translation of the natural environment into cultural terms. The jungle is a social space.”²

The emphasis on place is fundamental to their music. The forest is a reflection of social relationships mediated by song. “If we compare at the level of segmentary, nonhierarchical societies adapted to tropical forest environments,” says Roseman, “two features become apparent. One concerns mutualistic responses to the rain-forest environment; the other, modes of political persuasion that are influential and cooperative rather than authoritarian and coercive.”³ One can imagine what became of music in Western history. We lost our informality in interaction and expression and song long ago, abetted along the way, as noted by author Dolores LaChapelle, by the mechanical clock promulgated to create and control a schedule of worship and work. In its thousand years the clock has become the great corporate destroyer of spontaneity. In her book on D. H. Lawrence, she refers to his *Plumed Serpent* regarding the replacing of bells in the church with drums: “In a few sentences Lawrence hints at the enormous changes implicit in moving from rigid clock time with metallic bells to drums timed to the natural rhythm of the day: dawn, first sun showing, sun highest in the sky and sunset.” She goes on to say, “The bells call attention to the Christian

Church standing there focusing all power onto itself; the drum connects humans with their circumambient universe and with nature's changing cycles." LaChapelle goes on to explain that "the drum is not a return to past ages; rather it is a remembrance of who we really are"—we lived to the syncopated beating in the womb, to the measure of the mother's heartbeat and that of her fetus which beats twice as fast. "The drum," she says, "has always been the center for sacred rituals in every culture in the world. . . . and the vehicle for ritual dancing as well."⁴

CERTAIN BIOLOGICAL MARKERS in childhood indicate readiness in primitive cultures—for example, the loss of milk teeth is a signal that children are ready to accompany adults and help in foraging and caring for other children. The boy learns the rudiments of the hunter/tracker skills and the girl the intricacies of the digging stick and the subtleties of plant distribution, but no routine work is expected of either. Children listen with rapt attention to hunting stories that become for them a vast source of cultural information. They play at hunting and cooking, but are not pressed into the food quest. Nonetheless both sexes learn to identify hundreds of plants and animals. Children at age six are typically anthropomorphic: they perceive other forms of animal life as motivated and feeling like themselves, which is the basis of kinship with the natural world. This feeling extends to plants as well. Trees are perhaps the most important plants in the lives of children. Because of our forest origins we have an affinity for trees, a tendency that is virtually compulsive in childhood and shared with most other primates. Gombe chimpanzees, for example, hunt game smaller than themselves, abetted by an open forest structure that hampers troop defense and enhances cooperative pursuit. The chimps climb trees for the view while hunting.⁵ It would be hard to overestimate the degree to which trees give internal shape to the space in which the child plays. They are on the one hand like great, protective, benign adults whose whispering and lightly percussive tremolo is like the humming of a kindly aunt or uncle. On the other hand trees structure space as though it were a labyrinthine underworld, where hiding is like survival itself. Trees were made for climbing, a return to quadrupedal motion, touching a chord in our genetic memory of an arboreal safety. The rough texture of bark against the chest and arms, the smell reminiscent of a time so long ago that we still had whiskers, the gift of nests and fruit, the green galleries and corridors, the vestibular possibilities in being rocked by the wind or bouncing on a limb are part of my own childhood recollections that go deep. I remember, as a child, climbing a twenty-foot sapling until it bent gently and lowered me to the ground, crawling into the hollow trunks of big old sycamores or river birches, imagining the possibilities of something else being in there. Building tree houses like nests, like the spectacled bears in South America or chimpanzees in Africa making platforms, prompts delight at the thought of sleeping in treetops. The dense forest has its gothic side and smell of danger too, perhaps as the visceral fear of an open-country vertebrate. The solitude, silence, dim light, and cool quiet of that great interior is profoundly calming. Tree climbing itself is very important. Colin Turnbull says: "A rich symbolism constantly reminds the Mbuti child of the supreme value of all, *ndura*, or 'forestness.'"⁶ The forest's limitation of our movement is different from the sense of freedom that open country gives us, and its roots go much deeper into our past, as though the forest were part of our brain, a silent mnemonic reminder, especially for children who have not asked the question of meaning and continuity with the natural world, a reminiscence emerging later in life.

ADOLESCENCE IS THE TIME in the life cycle when the human body develops to sexual maturity coupled with emotional changes that prepare the individual for adulthood in a community. Maturity is a relative matter. It depends on how well the individual has transited the passages of child-hood and youth. Neoteny slows down development in some parts of the body and personality to the extent that certain immature traits remain throughout life. Symbolic thinking comes with adolescence. Among primal peoples, plants and animals prepare the individual for the skills of metaphoric allusion to physical things in order to conceptualize abstractions. Totemism strictly speaking, is the social role of the individual by analogy to a natural series. Myths and spiritual and cosmological concepts are communicated by allusion to a familiar natural world. Peer groups are unimportant in a band of twenty-four in which there may be seven or eight children of mixed ages. And older children caring for younger children may have important ramifications that are not yet widely understood. With primal people, there are no adolescent groups brought together for ceremonial initiation. (Adolescent in-groups and secret societies occur in competitive and warlike cultures, not among hunter/gatherers.) "Hanging out" together of age-stratified youths may be one of the most destructive characteristics of our present culture. Without a childhood that has grounded them in the natural world, often without adults anticipating and properly monitoring and celebrating their transition into adulthood and understanding their idealism and need for spiritual experiences, youth often find themselves alone in this modern world. In age-specific gangs they are "growing themselves up" the

best way they know how, often in a milieu of violence and power rather than in spiritual communion. Because of the modern sense of loneliness and lack of true community, many psychologists and counselors see “separateness” as a major problem of the individual. Anthropologists sometimes attribute the lack of anxiety about self-identity among tribal peoples to a lack of self-consciousness: they are thought to be sunk in a group identity like a school of fish. Others regard the struggle with individual identity as failure to “identify” with nature. Indeed, there is a movement among environmental philosophers to reenvision the “self” to include plants, other animals, even the nonliving world. But maturity does not consist of the loss of one’s body boundaries, a subjective prenatal universality. Normal development consists, rather, of sharpening the distinctions between the self and the other to clarify one’s identity.

The danger is that the self, constantly removed and made unlike the others, may become isolated. But the Pleistocene solution is the enhanced complexity of relationships. A healthy personal development proceeds through a corresponding process that emphasizes relationships to others, so that intensified separateness does not maroon but establishes the self as ever more unique and yet more fully bonded to nonself by chains of interaction, kinship, dependence, cooperation, and compliance.⁷

In primitive communities a camp of thirty typically contains eight to ten hunters and the same number of gatherers. Prepubertal boys, like older men, help out and run snares. Prepubertal girls learn the skills by keeping at the sides of older women. Menarche is surprisingly delayed in girl foragers compared to modern females. Among the !Kung San of Africa it occurs at about seventeen years, in some industrial societies it comes as early as eleven. The reasons for the slower maturation may be normal exercise among the primitive people, reduced social intensity, reduced emphasis on sex in collective households in which children grow up in the presence of sexual life, or other factors related to diet or group expectations.

MARRIAGE FOLLOWS as the individual shows herself or himself skilled in the day-to-day tasks of a foraging life.

Marriage usually takes place at about age nineteen in primal societies, and the first child is born when the woman is about twenty. If the mother nurses the child for about three years she will probably have only three more children in her lifetime.⁸ Beyond the first twenty years are the stages of marriage, parenthood, young adulthood, midlife leadership, grandparenthood, kinfolk complexity, and elderhood. Each in some way is an appropriate aspect of the ontogenetic self, more or less fully realized and more or less nurtured and sustained by social skills. Meat is shared according to long-standing custom.

The old are sustained and respected. The cycle of the seasons predicates the foods to be sought and the weather to be expected. Because hunter/gatherers move from camp to camp and build only tiny huts of sticks, their impact on the earth is almost zero. The various crises in modern society—schooling, adolescent gangs, divorce or enmity, midlife changes, the “care of the elderly”—may be only pathological expressions of normal ontogeny when the culture is so stressed and bent that it cannot guide the new person emerging at each stage.

Just as our bodies respond appropriately to a great many subtle stimuli during a twenty-four-hour day/night, we have different needs, anxieties, and social skills that emerge with age. What complicates this in our own time is the deformation of the life cycle, so that students of ontogeny face the difficult task of working backward from the stressed examples of children and adults and medically sustained old age.

OLD AGE IS LESS WELL ONTOGENIZED, but it too has its nodes. Among the older generation of primal peoples, becoming a grandparent actually initiates a new level of child care, freeing the young parents for more strenuous duties that older people cannot do. It has long been speculated that our species has “postreproductives” because the old are better memory banks, keepers of the lore and genealogy, healers, accumulators of useful social lessons (especially childrearing and the resolution of disagreement) and are better suited to roles of authority and tutoring in ceremonial matters.

“Postreproductive” is clearly a biased term that neglects the many functions of older individuals. Among the !Kung San virtually all of the old folk are storytellers.⁹ Care of the child is a crucial task in foraging societies. An important aspect of the life cycle has to do with the extended circle of family and friends in which a child is reared. The child grows up owning and wanting very little, gaining familiarity with the means and joys of life. Parents are less important in primary care than they are in today’s world. Not only are grandparents available but so too are uncles, aunts, cousins, and siblings. And all of these may reinforce each other as they share in the care of the child. As a result the parents themselves may be better friends of the children than in nuclear families where their admonitions, rules, directions, and scoldings might poison a relationship. Lifelong hostility to one’s parents is not normal. Perhaps

this pathology arises from a deprivation of avuncular and grandparental care.

The old do not sleep through the night as soundly as their grown children—perhaps because their spontaneous wakefulness has been genetically programmed for putting wood on a fire that might go out at 3 A.M., a fire whose flame is not only heat-giving but also a deterrent to predators. If older people wistfully flounder sleepless in our own time, perhaps it is because so many of their adjunct and advisory functions have been lost in the disintegration of the extended family, replaced by the technologies of recollection and decision making, the cult of youth, or their own decrepitude as victims of premature failed health.

A meditative stillness that is good for the human soul, suggests poet Gary Snyder, was invented by motionless hunters.¹⁰ That moment of silent reverence comes also at the final death stroke when one succumbs to the cycle of life.

WHAT CAN WE CONCLUDE from this brief glimpse of the human life cycle? Two things of paramount necessity for proper childhood development come to mind. The first is the opportunity to explore, understand, and become intimately connected to the nonhuman environment that will provide the grounding for symbolic meaning throughout the life cycle.

The second is mitigated neoteny: the appropriate social and cultural responses that will guide and support the child, as well as the child in the adult, to his or her final hour. We are given a time plan for our lives—an ontogeny—that is part of our genetic heritage. It commits us to cultural solutions according to a calendar of development. It succeeds only if this social caretaking is in psychological and physical accord with the natural world. If our immaturity is unmitigated we remain stymied throughout our lives, sunk in the symptoms of infantile emotions and demands, of juvenile literalness and materialism, of the violence to which unmitigated adolescent idealism leads as callow ideology engenders dogmatism and impulsive action.

NOTES

1. Lionel Trilling, *Beyond Culture: Essays on Literature and Learning* (New York: Viking, 1965), p. 115.

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2. Marina Roseman, "The Social Structure of Sound: The Temiar of Peninsular Malaysia," *Symposium of Comparative Musicology*, Proceedings of the Society for Ethnomusicology, 29th annual meeting, University of California, Los Angeles, 18–21 October, 1984, pp. 414–415. Editor's Note: Louis Sarno and Bernie Krause, in their book *Bayaka: The Extraordinary Music of the Babenzele Pygmies and Sounds of Their Forest Home* (Roslyn, N.Y.: Ellipsis Arts, 1995), describe the Babenzele Pygmies, modern primitives, who are surrounded with music from conception to death in work, in play, and in ceremony.

Boys begin drumming on trees, pots, and available objects while they are still toddlers, pluck the bow-harp at seven, and progress to mastery of notched flutes and harp-zithers, which they learn to construct in early adulthood. Girls four years old sing along with the drumming, are improvising at the age of seven, and develop remarkable technical singing skill by the time they are young adults.

In a personal communication of 3 October 1997, Bernie Krause explained further: "Sarno (independently) discovered what we found some time ago . . . that where tropical forest-dwelling groups still live closely connected to their environments uninfluenced by Western culture, they tend to use the sounds of their habitat(s) as a kind of natural karaoke orchestra to which they improvise and create their music—something I suspect we used to do very long ago."

3. "The Social Structure of Sound," p. 435.

4. Dolores LaChapelle, *D. H. Lawrence, Future Primitive* (College Station: University of North Texas Press, 1996), pp. 159–160.

5. Geza Teleki, "The Omnivorous Diet and Eclectic Feeding Habits of Chimpanzees in Gombe, Tanzania," in Harding and Teleki, eds., *Omnivorous Primates*, pp. 323–325, notes that in one study forty-eight chimps killed thirtythree colobus monkeys, twenty-three bush pigs, fourteen bushbucks, two redbell monkeys, two blue monkeys, and a baboon in a year. Predation on mammals gained them up to 180 grams per hour, while eating termites gained only 70 grams. Among the chimps the males tended to seek mobile prey, which they surrounded cooperatively and stalked using terrain and plant cover, while the females undertook a "leisurely exploitation of invertebrate resources." Kinship, age, sexual status, and social status, that is, "all the basic behavioral and social forms of human meat-sharing." In hunting they did not use many tools, but then they did not hunt animals as big as themselves.

6. Colin Turnbull, *The Human Cycle* (New York: Simon & Schuster, 1983), p. 50.

7. Harold F. Searles, *The Nonhuman Environment* (New York: International Universities Press, 1960), pp. 100–103.

8. S. Boyd Eaton, Marjorie Shostak, and Melvin Konner, *The Paleolithic Prescription: A Program of Diet & Exercise and a Design for Living* (New York: Harper & Row, 1988), pp. 201–206.

9. Megan Biesele, "Aspects of !Kung Folklore," in Richard B. Lee and Irven DeVore, eds., *Kalahari Hunters and Gatherers* (Cambridge, Mass.: Harvard University Press, 1976), pp. 302–324.

10. Gary Snyder, quoted in Peter B. Chowka, "The Original Mind of Gary Snyder," *East-West*, June 1977.